

## CLAIMS

What is claimed is:

1. A communication system comprising a first communication apparatus and a second communication apparatus, wherein

the first communication apparatus comprises:

means for generating a signal which has a frame comprising a plurality of slots and includes one or more known pilot symbols and one or more sync words for frame alignment in each of the slots; and

means for transmitting the signal, and

the second communication apparatus comprises:

means for receiving the signal;

means for carrying out coherent detection by using the pilot symbols included in the signal; and

means for establishing frame alignment by using the sync words included in the signal.

2. The communication system as claimed in claim 1, wherein the means for generating includes a pilot symbol portion and a sync word portion alternately at fixed intervals in each of the slots in the signal.

3. The communication system as claimed in claim 1, wherein the means for carrying out coherent detection carries out coherent detection by also using the sync words after the frame alignment is established.

4. The communication system as claimed in claim 1, wherein the first communication apparatus is a base station and the second communication apparatus is a mobile station, or the first communication apparatus is a mobile station and the second communication apparatus is a base station.

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5. A communication apparatus comprising:

means for generating a signal which has a frame comprising a plurality of slots and includes one or more known pilot symbols and one or more sync words for frame alignment in each of the slots; and

means for transmitting the signal.

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6. A communication apparatus comprises:

means for receiving a signal which has a frame comprising a plurality of slots and includes one or more known pilot symbols and one or more sync words for frame alignment in each of the slots;

means for carrying out coherent detection by using the pilot symbols included in the signal; and

means for establishing frame alignment by using the sync words included in the signal.